Volume 35 Number 2
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Route to PRR

Desk

School Life

◀ Peace and Plenty

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FEDERAL SECURITY AGENCY
Office of Education

STANDARDS AND WAGES

THE other night I heard a radio commentator say that there had finally been established and placed in effect a minimum wage for teachers of Missouri. The smallest salary, I believe, was $1,600 and raises would be based on college credits so that a teacher with a masters degree could earn the magnificent sum of $2,800 per year.

That little blurb on the radio, a little news item, upset me; it shows how "screwy" our thinking has become and points immediately to the cause of many, many of our problems.

First, there is the salary itself. In this day and age the "flunkie" who dropped out of school after the third grade makes $2,800 a year and yet school board members, legislators, and, unfortunately, taxpayers expect a teacher to get a "higher education" and keep on getting it, using their own time and resources so that they may eventually earn $250 a month. Obviously, anyone with the proper qualifications for a teacher could double or triple that take without trying.

Someone at this stage always says: "But we get teachers at those wages." Why? Because some people would rather teach than eat, for it is obvious they cannot do both at today's prices. Eventually, even they find it difficult to teach on an empty stomach and seek greener pastures.

The second silly thing that is brought out in the aforementioned statement is that increase in salary is based on credit hours earned in a university or college. What nonsense! Do not pay a teacher for teaching, for doing an unusually good job, for showing interest, initiative, and love of children. Do not increase the salary because the teacher comes early, stays late, and has a knack for building citizens, men and women from boys and girls. Oh no! Do not do that, that would be too logical and would take thinking, supervision, and alertness on the part of the teacher's superiors. It is so much easier to give them a "couple of bucks" more for every credit hour they gather from school in the summer when they might more profitably, if they wish, be preparing better things for their pupils in the fall. What has happened to us in America?

You cannot keep good teachers for $200 a month and you cannot pick the most effective, intelligent, understanding, eager teachers by adding up the credits they earn in college during their summer vacations and at night school.

The time for energetic support of the good teachers in our country is now; in fact, as usual, we are late. It is high time that we use our energies to support the effective teacher and to see that such teachers are paid adequately. Given the incentive and the wherewithal the interested teachers will seek advanced training because they want it, and are interested in it, not because it comes as a decree from a school board or administrator and is a necessary evil to be tolerated in order to hold a job.

R. O. Muether, M. D.

Reference: The Journal of the Missouri State Medical Association, Vol. 49, No. 9, September 1952, p. 777. (Excerpts only.)

School ★ Life

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The cover photograph, furnished by the United Nations, is titled "Peace and Plenty Can Be Ours In Our Lifetime." The caption emphasizes that we can have both peace and plenty if the world's nations and their peoples dedicate themselves to achieve them.

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THE OFFICE OF EDUCATION was established in 1867 "for the purpose of collecting such statistics and facts as shall show the condition and progress of education in the several States and Territories, and of diffusing such information respecting the organization and management of schools and school systems and methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country."

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Korean teachers of English at the English Language Institute, University of Michigan. Standing, right, Dr. Charles Fries, Institute Director, and left, Dr. Robert Lado, Assistant Director.

"... in touch with the people of democracy"

by Thomas E. Cotner,
Acting Director, Educational Exchange Branch, Division of International Education

AN ANXIOUS group of South Korean teachers listened intently to a radio in their New York hotel as news came that North Koreans were invading South Korea. Early broadcasts reported the fall of Ton Am Dong, the home of one member of the group. Succeeding news flashes brought word of the capture of other cities where friends and relatives lived. What would be their fate? When could they themselves return to Korea and when could they see loved ones again? What would happen to their homes, their families?

Within 2 weeks, upon the completion of their training program, these teachers were to begin their journey homeward. Reservations had been made and last minute gifts had been purchased for family and friends. Now, they could not return. Tense weeks of waiting lay ahead before they could fly back to Seoul and other cities in their homeland.

The Office of Education, in cooperation with the Department of State, had brought these 11 teachers of English from Korea to study the latest methods, techniques, and materials used in teaching English as a second language. In this group were nine men and two women. Three of the group taught on the college level and eight in secondary or middle schools.

We Will Meet Again

One of the teachers vividly described his departure from Seoul in these words:

> I finished my early breakfast which my wife had prepared for me so early in the morning . . . I looked into my child's eyes. She was in tears. I kissed her on the cheeks, and patted her shoulders. She was silent. Perhaps, she was afraid of losing me. I said to her, "I will be back in four months. By that time, we'll eat tomatoes and melons from our garden; we will meet again."
>
> The airport was about 16 miles from the city of Seoul, but the bus carried us there in a moment. Many of my fellow teachers, many of my neighbors, and many of my students were already there.
>
> I got into the plane and looked at my daughter through the glass. She waved her hand. The plane moved. I kept on looking at her. She kept on waving her hand.

Eight of the teachers came together, arriving in Ann Arbor on March 9, where they were to attend the University of Michigan's English Language Institute. Two days later, the other three teachers arrived. They were to remain in Ann Arbor for two and one-half months. While there the teachers found snow in March, showers in April, and beautiful flowers in May. Describing Ann Arbor, one of the teachers said it was "a quiet, peaceful town and a beautiful place in the springtime. Surely it was 'an harbour' to those who first came there two hundred years ago; I do not doubt it."

Dr. Charles C. Fries, Director of the English Language Institute, and Dr. Robert Lado, Assistant Director, had arranged a very interesting program for the Korean teachers. Classes were given in grammar, composition, pronunciation and speech correction, linguistics and phonetics, and in the methods of teaching English as a second language.

Time was also taken, in addition to a busy schedule of classes, to visit the River Rouge plant of the Ford Motor Company, the Kellogg Company, Jackson Prison, the Edison Museum, and to make a week-end

trip to Chicago. Friday nights were given to social events, parties, and dancing. Speaking of the warm reception of the group, one of the men said: "Everybody in the street, every student on the campus, and every teacher in the classroom was happy, sincere, and kind to us. I felt I was getting in touch with the people of Democracy."

The period of study at the University of Michigan ended all too soon and it was time to continue with another phase of the fellowship program planned for them. Firm friendships had been made and when the Koreans were taken to the railroad station, there were tears in the eyes of some as they said their good-byes. One group of five went to Lansing, Michigan, to visit schools and community projects in that area. Another group of six journeyed to Philadelphia to follow a similar program there.

"Seeing Is Believing"

In Lansing, the activities of the group were planned by Dr. Robert G. Koopman of the State Department of Public Instruction and by Professor Troy Stearns of the Michigan State College faculty. The teachers conferred with school administrators; visited elementary and secondary schools and an agricultural college; lived in city and farm homes; visited stockyards and industries; attended PTA and civic club meetings; made speeches on Korean culture and history; and generally became acquainted with the educational, cultural, and social life of the United States. As a result of these visits to schools, homes, industry, farms, and community projects, the teachers observed that the school was an extension of education in the home; that school and society were closely related; that United States education was democracy in action; that coeducation worked easily and was a "national phenomenon" in home and society; that parents and teachers worked well together; that businessmen were interested in schools; and that attention was given to training students for citizenship and a place in society. One teacher commented:

> We saw how democracy works in the field of public education. By now I think I understand the American way of life to some extent . . . "Seeing is believing." I think my visit to the United States is one of the biggest events of my life, and I will never forget the impression of the United States that I have. I will tell what I saw and what I felt here to the Korean people to the best interest of the two nations. Perhaps I may, I hope, be able to make the Korean people know what true democracy is in the real sense of the word.

The group of six teachers going to Philadelphia for visits to public schools and places of historic interest also had a memorable experience. The program there was arranged by Mrs. Dorothy Crawford, Principal of the Philadelphia High School for Girls. One teacher, after visiting nursery-kindergarten schools, three elementary schools, five high schools and two universities in the city, observed that "teachers were not just teachers, but parents and friends to the children." She also noted that pictures, radio, television and advertising served as teachers. Students were always doing something or looking at something—a moth in an incubator, white mice, or birds in a cage. "How I loved the free atmosphere of the classrooms," she concluded.

"The most conspicuous feature we found in the American schools," said another teacher, "is that students are fond of debates and discussions. The teacher does not pretend to be a superior being nor dominate the class; he considers himself one of the group or just a moderator. He doesn't try to cram knowledge into the heads of the students, but encourages the students to learn from their own efforts."

An interested citizen took the teachers to see Atlantic City. They were impressed with the tremendous crowds of people, the long boardwalk, and the pleasure they had. Mrs. Crawford also took them to see Independence Hall and the Liberty Bell. "I paid my respect to those who gallantly fought against their oppressors," said one. Another was quite stirred by his visit and wrote in his report:

> As I looked, I rehearsed some passages of the Declaration of Independence in my bosom and was reminded of the famous speech by Patrick Henry, "Give me liberty or give me death." They say that all the representatives in this Hall signed the Declaration. I thought in my mind, as long as the Liberty Bell is ringing in American minds, they will remain a free Nation. So long as the Declaration of Independence is kept in American hearts, they will be free from despotism and slavery.

All of the teachers had an opportunity to spend a day or two in Boston and a few days in New York. The time in Boston was too short to see everything of interest, but they did see Harvard University, Longfellow's home, and Old North Church, and took a tour of the City. In New York, they visited Columbia University and New York University and went to Lake Success to see the United Nations in session. They were impressed with the seriousness of purpose of the delegates and one teacher expressed the consensus of the group when he said, "It was very clear to me that the U. N. is making a truly great effort to establish permanent world peace and to improve the happiness of humanity." One teacher commented on his visit to the Empire State Building as follows: "We went up to the top of the Empire State Building, the man-made monster. I wondered how a man with only a small head and ten tiny fingers could make such a gigantic edifice."

Life in the United States

Many of the teachers had interesting comments and observations to make on life in the United States and about our national characteristics. "I found the following merits rather than faults in the national character," wrote one of the men, "kindness, noninterference, countenance without any discontented look, punctuality, and placing value on public health and morality." Another observed that young people, particularly after marriage, "are independent of their parents. They are self-supporting persons. Men and women, even the children, are treated more or less equally in society and in the home." Still another teacher found Americans "fond of machines, active and brisk, sociable, loving adventure and thrill, and their lives based on science."

"The United States of America," bluntly said one of the ladies, "is the only country where women should live. Of course, America is good for men too, but it is the best country for women." She observed that women in the United States were enthusiastic, energetic, ambitious, and full of self-confidence. She noted that in addition to fulfilling their duties in the home that they did church work, worked in business, politics and the professions, and that "they looked no worry." "Women are free in their speech, action, and rights which is quite different from the status of women in the Orient." She hopes to improve the status of women in the social, economic, and political fields upon her return to Korea.

(*Continued on page 30*)

Do We Teach Them in Our Schools? What Can You Do To Help?

ANOTHER vest-pocket sized leaflet presenting in layman's language information about our schools is now available.

Copies may be ordered, 10 cents each, from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. (25 percent discount on orders of 100 copies to be sent to one address.)

Patterned after the publication "They Can't Wait", which has been so popular during the past year with educators and citizens interested in better schools, the new leaflet is titled "the 6 R's."

"They Can't Wait" was prepared by the U. S. Office of Education and nationally distributed during American Education Week in 1951. "The 6 R's" leaflet was prepared by the Office of Education for initial distribution during the 1952 observance of American Education Week.

In brief text and popular-type illustration, here is an idea of the content of "the 6 R's", looking through the eyes of Johnny's father, a typical American parent.

Too bad about that misfit—bright fellow, but he will never get anywhere. Doesn't work with others. Where'd he go to school anyhow? Didn't learn anything but the 3 R's!

That's funny! Costs in my business have been going up. Wonder how they manage in school . . . ? I see a lot more children around.

Guess I ought to look into this . . . Think I'll drop in at school tomorrow and talk with the Superintendent.

When costs are high, people look around for places to economize. And the school budget is always handy.

Plenty—if more like you know and care! Modern schools would help young citizens get ready for this 20th century world.

Yes, our children deserve the best possible education. Let's call a meeting to make sure they get it.

. . . And that's how it is, folks. The school board needs our help. We need to work together on this. All our groups—civic, religious, business, labor — our women's clubs—all are represented here. We love our children. What kind of schooling do we want for them? Please tell us what you think. . . .

Yes, let boys and girls learn these things. The 3 R's—Reading, 'Riting, and 'Rithmetic; and 3 more R's—Rights, Responsibilities, and Human Relations . . . 6 R's for good citizenship!

The Job Ahead for Educational TV

by Paul A. Walker, Chairman, Federal Communications Commission*

THERE are some, I suppose, who marvel at the sense of urgency that impels educators such as yourselves and the institutions you represent in this field of television. They may wonder at the speed and thoroughness with which you mobilized your forces back in 1950 and 1951 to present your case to the Federal Communications Commission for the reservation of 242 noncommercial educational channel assignments.

They may wonder at the alacrity with which you are now preparing to utilize these assignments.

While the general public may not be familiar with the gravity of the educational problems weighing on this nation, you people here are only too well aware of them because you are on the firing line.

It is because of your place in the first line of defense that you are so eager to employ this electronic weapon of television.

You are preparing to use the mighty power of television to help correct weaknesses in our educational system—weaknesses which are among the most glaring in our society.

You are stepping up your attack on these problems through television under the pressure of the world crisis which demands immediate strengthening of our democracy.

The challenges confronting you educators are momentous and numerous.

First, there is the insistent challenge of illiteracy.

Adults—persons of 25 years of age and over—who have completed less than five years of schooling are described by the United States Office of Education as functional illiterates. They may have the bare ability to read and write some but they cannot do so effectively. They cannot think effectively, express themselves effectively, nor participate effectively in the activities of everyday life. They cannot really communicate. They are handicapped in their home life, personal growth, health, citizenship, social activities and, of course, in their occupational opportunities.

In this nation of wealth, progress and world leadership, eleven percent of our adults—almost 10,000,000 men and women—are functional illiterates.

Literacy education efforts have encountered these difficulties, among others: These adult illiterates are often too embarrassed to meet in literacy classes, they may feel they are not properly clothed, they are too tired after a hard day's work to travel to a distant school and attend class.

Lifting From Illiteracy

The audio-visual techniques of television are particularly well-adapted to literacy instruction. But television's power to teach in the privacy and comfort of one's home is obviously of exceptional value in meeting the handicaps I have just listed.

Lifting these people from illiteracy to literacy not only enables them to live a better life but makes them more able citizens, more valuable to industry, more valuable to the Armed Forces, and better consumers. They will be better able to understand and appreciate all the other programs television has to offer—both over educational stations and commercial stations.

Let us figure this from a financial standpoint and conservatively. Let us put the cost of stations as high as $500,000. Then if we raised the annual income of only one-eighth of these illiterates only $100, that would more than pay for the construction of all the 242 educational stations on the assignments reserved by the Commission in one year.

This challenge of illiteracy then is not only a challenge to education but to industry and to all segments of our society.

Then there is the challenge of overcrowding in our elementary schools and high schools: 300,000 classrooms are needed immediately. And, because of the increase in population, another 300,000 will be needed in 1958.

There is the challenge of the shortage of elementary school teachers, now estimated at 53,000.

There is the challenge represented by the millions of eligible young men and women who are unable to go to college mainly because of economic reasons. For every American boy and girl now in college, there is another boy and girl qualified to attend but who is not attending because of lack of funds.

Too many families simply cannot afford to send their sons and daughters on to college. The colleges have been charging more and more for tuition.

But tuition is not the only cost. Many youths who could pay the tuition cannot afford to go to a distant city and pay the transportation and living costs while they attend school. This highlights the scarcity of our institutions of higher learning. We have many of them in America—1,850 of them. But as impressive as that total is, it is not enough. And the colleges are not conveniently enough located. To help overcome this, community colleges are being urged.

It is obvious that television can also be of assistance in overcoming this maldistri-

*Address at the WOI-TV Television Workshop sponsored by Iowa State College at Ames, Iowa, August 18, 1952, in cooperation with the National Association of Educational Broadcasters and the Joint Committee on Educational Television.

bution. Courses can be broadcast over a radius of 50 miles or more and can reach students in their homes. Various degrees of contact and supervision can be developed by colleges in the handling of these courses.

Teaching the Nation

By the miracle of television, top flight educators can give their courses in Minneapolis and New Orleans the same day. In fact, they can give their courses on the West Coast and the East Coast, or over the whole nation for that matter, simultaneously.

Implicit in all these problems is this challenge: In a democracy we are extremely sensitive to the rights, the privieges, the potentialities, and the aspirations of the child or the adult as an *individual*. As a general principle, we believe in equality of opportunity in education.

In addition, educational leaders point out the value of an educated citizen to his community and to his nation.

Every time we fail to capitalize fully on the minds of our youth by not giving them the fullest educational opportunities that they are capable of employing, we are guilty of a monstrous waste of human resources.

Television will enable us to get more education per teacher.

While I am on the subject of the educational needs of our youth, let me mention 3 recent reports which indicate an urgent need for the kind of constructive, expert, professional type of television programming that you educational broadcasters can offer for the leisure time of our boys and girls.

The first is the Report on Children's Radio and Television Programs in the Los Angeles area issued by the National Association for Better Radio and Television.

During one week in May, the Report states, the seven television stations of Los Angeles carried 58 hours of children's programs. The Association evaluated these programs as follows:

	Hours	*Minutes*
Excellent	8	30
Good	10	45
Fair	4	30
Poor	1	45
Objectionable	24	55
Most Objectionable	7	40

In other words, of the total of 58 hours of children's programs, the Association found 39 hours—or almost 70 percent—in the "fair," "poor," "objectionable," or "most objectionable" category.

In its report, the Association stated that programs in the "objectionable" category are rated thus mainly because the major theme is crime. Crime programs, the Association commented, "provide pretty poor food for young, growing minds."

On the heels of this came a second report revealing what is happening to some of these "young, growing minds" of American children.

This report was made to the National Social Welfare Assembly by Dr. Martha M. Eliot, Chief of the Children's Bureau of the Federal Security Agency.

According to Dr. Eliot, 1,000,000 children are now getting into trouble with the law each year. By 1960, there will be 50 percent more children between 10 and 17 than there were in 1950. This is the age range within which most juvenile delinquency cases fall.

Dr. Eliot pointed out that even if the *proportion* of juvenile offenses does not increase in that time, we can expect the number of children getting into trouble with the law by 1960 to run around 1,500,000.

Looking Beyond

In the face of reports like these, how can there be any doubt about the service that our educational institutions can render to the children of America by means of noncommercial educational television stations?

Now let us look beyond the challenge represented by the deficiencies in the elementary, secondary and higher education levels and consider the task confronting us at the fourth level—adult education.

The urgency of the movement to promote this fourth level is underscored by the establishment by the Ford Foundation of the Fund for Adult Education. This Fund has given substantial aid to the movement.

The Ford Foundation, in discussing its objectives in the field of adult education, has made this statement:

> No census can show how many persons in our society labor under the disabling effect of emotional maladjustment. The estimates range widely; some authorities regard emotional maladjustment as the most characteristic and widespread ill of our civilization. In a small percentage of instances this takes the form of crime, delinquency, and insanity. In the great majority of cases it is disclosed in illness, in unstable family life, in erratic and unproductive work habits, and in inability to participate effectively in community life. Maladjustment makes people unable to live happily with their fellows, makes them unwilling to cooperate adequately or unable to compete successfully.
>
> The lack of satisfactory adjustment manifests itself significantly in the use of leisure time. Shortened hours of work, earlier retirement, and the medical advances which have increased life expectancy, have all made great increases in leisure time. Nevertheless, many persons appear unable to find constructive uses for their nonworking hours, and this contributes significantly to personal and social tensions.

The challenge to educators in the field of adult education calls for immediate action for a most obvious reason. At the elementary, the secondary and the higher education levels, we are educating for the future. The children and the college students will in due time take their places as citizens and as leaders in our political, social and economic life. But in the field of adult education, we are seeking to improve grown-ups who for better or worse have already taken their places in our society. That challenge is here today—this very minute.

A few weeks ago, as many of you know, President Truman conferred with the Federal Communications Commission on the progress of educational television and expressed his interest in helping to further the movement.

All these challenges point to the urgency of the need for the kind of service that you future operators of educational television stations can render.

I have heard it argued that modern man is obsolete.

I do not go that far. I think that view is premature.

But I do believe that the uneducated man is obsolete. He cannot do justice to himself and he cannot do justice to his citizenship in our increasingly complex, dynamic modern world.

We are living in a time when jet planes are flying 1,300 miles an hour; when we have already accumulated huge stores of materials for an entirely new form of power—atomic energy—which may change our entire way of life.

We are living at a time when citizenship makes demands on us never made before. The older, slower, half measures will not do. It takes a lot more information to be an effective citizen than it did in older, simpler times. In this democracy of ours, matters are decided by the vote of the citizen. It is vital that the sovereign citizen also be an informed citizen.

And then, as directors of these educa-

(*Continued on page 28*)

Good Education—
What Would It Cost?

by Herbert S. Conrad, Chief, Research and Statistical Standards, and
Rose Marie Smith, Educational Statistician

IT is widely recognized that good education for our Nation's children cannot be obtained at a minimum expenditure-level. Teachers' salaries, teaching aids, educational supplies, guidance services, clerical assistance, health services, satisfactory transportation of pupils, proper operation and maintenance of the school plant, and alert school administration—all require money. In education, as commonly elsewhere, one generally gets about what one pays for. Granted that good education cannot be bought by money alone (staff morale and devotion hinge on more than simply cash), nevertheless it is also true that an educational program of good quality cannot be obtained at cut-rate, shoddy prices. What would *good education* in the various States cost? Would it cost 10 percent more than is ordinarily expended, or 50 percent more, or what?

One way to answer this question is to—

a. Determine the level of expenditure in a few school systems widely recognized for the quality of their education: we may call this the *desirable* level of expenditure.

b. Determine the *average* level of expenditure in each State.

c. Determine the *difference* between the desirable level of expenditure and the State-wide average.

d. Multiply the difference between the desirable level and the State-wide average by the number of pupils in average daily attendance in each State. This product is the *additional expenditure* (beyond the present expenditure) required to bring the quality of education up to the desirable level.

e. Divide the additional expenditure by the present expenditure, and multiply the quotient by 100. This is the *percentage increase* needed to achieve the desirable quality-level of education.

Although the Office of Education does not rate or rank State or city school systems, some school systems are widely recognized as being above average. They may pay higher salaries to the instructional staff, maintain a more satisfactory pupil-teacher ratio, offer a more varied curriculum, provide broader and more satisfactory school services, have a higher retention rate, etc. The school systems in four cities were selected as fulfilling such requirements. These cities are located in Connecticut, New York, Ohio, and California, respectively. In size, the cities range from 45,000 to over 300,000 (1950 census); only one of the cities could be regarded as a suburb. The quality-level of education in these four cities is desirable, but *not more desirable than is reasonable or possible in many other places.* The average current expenditure per pupil in the school year 1949–50 in the four cities was $299. This, of course, is well above the national average for that year, but it is by no means extreme. In brief, the quality-level of public elementary-secondary education in the four cities is good, but certainly subject to further improvement, and not actually as high as can be found in specially well-favored communities.

Application of the procedure outlined in steps *a–e* above yields the data given in Table 1. All the figures in this table refer to "current expenditures"—i. e., to expenditures for current operation of the school, as contrasted with "capital outlay" (expenditures for sites or school construction) or "debt service" (redemption of bonds and payment of interest). The figures refer to expenditures for full-time public elementary and secondary day schools only (evening and summer schools are excluded); and the figures refer exclusively to the school year

Increase in Current Expenditures Needed For Good Education

(Total United States need: $2,006,000,000, or an increase in current expenditures of 43 percent.)

1949–50, the latest year for which data are available from all the States.*

The map on the adjoining page shows by what percentage the "current expenditure" in each State would have to be raised to bring its educational program up to the desirable level.

While there are some technical qualifications** to the assumptions and procedures underlying the figures in Table 1, the facts brought out by this table are basically valid and appear reasonable. **Education at a desirable quality-level—that is to say, *good education*, though by no means the very best education—would in 1949–50 have required about $2 billion more than was expended (see Table 1, column 5). This is an increase of 43 percent above what was actually expended (viz., $4,651,464,000).**

Wide variation exists among the different States with regard to the percentage-increase required. The required additional expenditure in California, for example, would be relatively small—only 13 percent; in Wisconsin it would be 30 percent; in Texas, 43 percent; in Utah, 67 percent; in Maine, 90 percent; in South Carolina, 145 percent; in Mississippi, 274 percent (this is the highest).

Expenditure-increases of the magnitude just cited are rather obviously beyond the resources of many local communities to finance, and also probably beyond the resources of at least some of the individual States. A solution to this financial problem must be found, if we really believe that a child is entitled to a *good education* regardless of the State or community in which his parents reside. The answer to the financial inability of local communities to provide good education seems obviously to lie in State aid; and the answer to the financial inability of some of the States to supply such aid seems equally obviously to lie in Federal aid. Exactly what form State or Federal aid should take, and how such aid should be administered, are questions outside the scope of this article.

For emphasis let it be repeated that (*a*) the figures in the present article refer only to full-time public elementary and secondary day schools; (*b*) the figures refer to "current expenditures" only; (*c*) the figures apply particularly to the school year 1949–50 (the latest year for which data from all States are available); and finally (*d*) the "desirable" quality-standard referred to in this article exemplifies a practical level of *good education;* it is not a maximum level, nor does it come up to the quality-level of specially well-favored communities in the Nation.

Technical Note

The chief qualification to the data in Table 1 relates to inter-State differences in the *scope* of education. In some States, for example, relatively few children attend kindergarten, and a fairly large proportion of older-age children have dropped out of high school. Such inadequacies of the school system, however, would not be reflected in column 3 of Table 1, which reports only the per-pupil expenditure *for the pupils receiving education* (rather than for all those who should be receiving education). To bring the *scope* of education in all the States up to a desirable level would require an amount additional to that indicated in Table 1 as necessary to bring the *quality* of education (for those already receiving education) up to a desirable level.

(*Continued on page 26*)

*In this connection it may be noted that, in terms of dollars with the same purchasing power as in 1951–52, the average expenditure of $299 in the four cities in 1949–50 would be equivalent to an expenditure of $334 in 1951–52. (Adjustment by the Consumer's Price Index of the Bureau of Labor Statistics. The price-level was 11.7 percent higher in 1951–52 than in 1949–50.)

**See technical note at the end of the article.

Table 1.—Increase in current expenditures needed to bring full-time public elementary-secondary education to a desirable level: 1949–50

State	Average daily attendance, 1949–50	Current expenditure per pupil in average daily attendance, 1949–50	Difference between current expenditure per pupil in average daily attendance in each State and in 4 city systems regarded as "desirable"[1]	Additional amount needed to raise current expenditures to a desirable level, 1949–50 (Col. 2 x Col. 4) (Thousands)	Actual current expenditures, 1949–50 (Thousands)	Percentage increase needed in current expenditures to bring education to a desirable level, 1949–50[2]
1	2	3	4	5	6	7
Continental U. S.	**22,283,845**	**$209**	**$90**	**$2,006,000**	**$4,651,464**	**43**
ALABAMA	594,632	117	182	108,000	69,627	155
ARIZONA	126,510	241	58	7,300	30,451	24
ARKANSAS	355,030	112	187	66,400	39,661	167
CALIFORNIA	1,623,890	264	35	57,000	427,911	13
COLORADO	201,235	220	79	16,000	44,204	36
CONNECTICUT	245,217	255	44	11,000	62,438	18
DELAWARE	40,873	259	40	1,600	10,577	15
FLORIDA	414,957	181	118	49,000	75,219	65
GEORGIA	619,846	123	176	109,000	76,468	143
IDAHO	111,038	186	113	12,500	20,653	61
ILLINOIS	1,031,800	258	41	42,000	266,682	16
INDIANA	588,857	235	64	38,000	138,673	27
IOWA	417,833	231	68	28,000	96,324	29
KANSAS	300,822	219	80	24,000	65,751	37
KENTUCKY	484,062	121	178	86,200	58,485	147
LOUISIANA	420,740	214	85	36,000	90,070	40
MAINE	144,795	157	142	20,600	22,801	90
MARYLAND	298,534	213	86	26,000	63,704	41
MASSACHUSETTS	560,331	236	63	35,000	132,486	26
MICHIGAN	986,623	220	79	78,000	216,618	36
MINNESOTA	434,284	242	57	25,000	105,199	24
MISSISSIPPI	472,149	80	219	103,000	37,627	274
MISSOURI	558,186	174	125	69,800	96,884	72
MONTANA	94,405	268	31	2,900	25,259	11
NEBRASKA	203,581	217	82	17,000	44,191	38
NEVADA	25,116	246	53	1,300	6,184	21
NEW HAMPSHIRE	65,643	211	88	5,800	13,818	42
NEW JERSEY	583,063	280	19	11,000	163,146	7
NEW MEXICO	120,901	222	77	9,300	26,898	35
NEW YORK	1,700,358	295	4	7,000	501,648	1
NORTH CAROLINA	797,728	141	158	126,000	112,333	112
NORTH DAKOTA	103,244	226	73	7,500	23,361	32
OHIO	1,109,815	202	97	108,000	224,314	48
OKLAHOMA	394,036	207	92	36,000	81,584	44
OREGON	228,574	272	27	6,200	62,172	10
PENNSYLVANIA	1,408,425	216	83	117,000	303,882	39
RHODE ISLAND	83,763	240	59	4,900	20,137	24
SOUTH CAROLINA	413,551	122	177	73,200	50,615	145
SOUTH DAKOTA	108,385	230	69	7,300	24,504	30
TENNESSEE	583,126	132	167	97,400	77,071	126
TEXAS	1,156,659	209	90	104,000	241,603	43
UTAH	142,272	179	120	17,100	25,404	67
VERMONT	56,282	193	105	5,970	10,855	55
VIRGINIA	536,831	146	153	82,100	78,143	105
WASHINGTON	356,756	248	51	18,000	88,343	20
WEST VIRGINIA	398,913	150	149	59,400	59,781	99
WISCONSIN	449,546	230	69	31,000	103,400	30
WYOMING	48,922	263	36	1,800	12,855	14
DISTRICT OF COLUMBIA	83,706	256	43	3,600	21,448	17

[1] The average current expenditure per pupil in average daily attendance in these four cities, in 1949–50, was $299.
[2] Obtained by dividing each entry in column 5 by the corresponding entry in column 6, and multiplying by 100.

NOTE: Detail does not necessarily add to totals because of rounding.

Pupil Activities From the Crow's-Nest

by Ellsworth Tompkins, Specialist for Large High Schools
Division of State and Local School Systems

THE LOOKOUT stands in the crow's-nest and through his glasses scans the ocean ahead through which the ship will sail. He performs one of the essential duties which make it possible for the ship to reach its destination without undue delay or accident. In schools as in ships, it is necessary to know where we are going and how we expect to get there. Voyaging continues, but the particular voyage must be determinate to make sense to passengers and crew and to be profitable to the owners of the vessel.

In scanning the educational scene from the equivalent of a crow's-nest, I have been particularly interested in a lookout's view of extraclass activities in secondary schools. What does the overview reveal? Perhaps you will be interested in the environment described below (status and trends) which one lookout sees.

Status and Trends in Pupil Activities

1. *Terminology.* The term "extracurricular" is obsolescent. Increasingly pupil activities are considered extraclass or co-curricular and decreasingly regarded as extracurricular. The underlying reason is that activities contribute to learning, both

Extraclass Programs for Today's Teen-agers

in class and out of class. Curriculum, usually defined as *all* the learning experiences provided youth under the sponsorship of the high school, includes both class and extraclass activities.

2. *Status.* The apparently logical step that will merge activities and curriculum still remains to be taken by a large number of high schools. Despite some progress in incorporating activities into the instructional program or integrating pupil activities with the curriculum, many high schools still regard pupil activities as *apart* from formal classwork of pupils. As a result, it is rather common for teachers to consider a sponsorship role as quite different from a teaching role. Somehow, advising a voluntary activity and teaching a class appear to require substantially dissimilar procedures.

3. *Organization.* Statistics published in 1951 indicate that 2 of 3 public high schools schedule pupil activities in an *activity period* within the school day. The small number of high schools having core programs integrate activities and classwork within the large block of time devoted to the core. Thus it can be assumed that nearly 1 of 3 public high schools organize activities on an after-school or before-school basis.

4. *Objectives.* Increasingly high-school staffs are discussing the role of the school in providing an adequate and effective program of pupil activities to serve the interests of pupils. If this has not been done, a first major step remains to be taken.

5. *Coordination.* High schools above 500 enrollment are increasingly centering responsibility for administration and coordination of pupil activities in a staff member designated as Director or Coordinator of Pupil Activities. Some released time from teaching duties is provided this person to accomplish his duties, which may include:

1—Making an inventory of pupil activity preferences;

2—Time and space scheduling of activities to avoid conflicts;

3—Scheduling pupils into activities they desire;

4—Helping to obtain sponsors from the teaching staff;

5—Maintaining records regarding activities;

6—Developing financial and accounting procedures;

7—Informing pupils, faculty, and community about school activities;

8—Appraising the effectiveness of activities from the viewpoint of the whole program and individual groups;

9—Making recommendations to the principal and staff about improvements needed.

Obviously, the principal in all but very small high schools cannot be expected to sandwich the coordination of pupil activities into other heavy administrative tasks. A director of pupil activities is therefore a needed liaison person to work with principal, faculty, pupils, and community. Pupil activities worth having deserve to be managed and coordinated adequately and intelligently.

6. *Development of specific all-school activities.* Three all-school activities—home room, assembly, and student council—are activities in which all pupils of a high school can participate. These activities are different from club and team activities—the extraclass—which pupils elect to join or for which they try to qualify.

(1) *Home room.* Sometimes considered the weakest link in the chain of high-school organization, the home room can be, and in many places is being, successfully conducted. Pupil participation is essential if the home room is to succeed. Good home rooms elect a president and secretary who preside, and record the sessions of the home room. The teacher acts in the capacity of sponsor. Generally, the home room is the unit for electing representatives to the student council; it advises them on policy and hears their reports. It arranges group discussions of interest to the members. It serves as administrative and attendance headquarters; it is the unit for receiving report cards, for receiving group guidance, and for fulfilling much personal guidance. A home room dominated by a teacher who contrives little pupil participation and devotes "unused" portions of home room time for pupil study is usually doomed to ineffectiveness. A home room teacher cannot act like a traditional classroom teacher and create the environment of a good home room.

(2) *Assembly.* Pupils help plan school assemblies and participate extensively in assembly programs. Fewer outside or paid programs are scheduled, but when scheduled are carefully screened. Usually, a student officer presides at assemblies. The school assembly is regarded as a teaching situation; in reality it is the largest class in the school. It provides a major opportunity for social integration and good public relations.

(3) *Student council.* The opportunity for participation by pupils in school government means that the student council cannot be regarded as just another club. It is the representative organization through which pupils cooperate with principal, faculty, and community, toward a solution of current school problems affecting them. The student council is increasingly regarded as the fountainhead of all student activity.

7. *Development of elective activities.* Three particular activities have grown rapidly in the high schools during the past decade—intramural athletics, service-type activities, and social-skill groups.

(1) *Intramurals.* This type of activity has increased tremendously. Intramurals are the means whereby many pupils develop a real liking for the "concept of school." Boys and girls participate in and manage, under wise direction, a host of intramural programs in the secondary school. They learn the fruitful lesson of cooperation and team spirit, which has such vital carry-over into adulthood. Their sense of belonging is enhanced and they learn to play according to the rules of the game.

(2) *Service-type activities.* Good civic attitudes generally grow out of participation in activities that stress helpfulness to others and service to the school and community. Service-type activities involve cooperation and selflessness; they have increased greatly within recent years. Latest nationwide statistics show that "Student Service" is a curricular offering to 8,805 high school pupils (news circulation, student leadership, student government, audio-visual education).

(3) *Social-skill groups.* Increasingly boys and girls wish to improve the social skills which their peer culture and society value. Since social skills develop through practice rather than study, it is natural that activities have an important role in developing them. Such activities may include social dancing, folk dancing, conversing, listening, appraising a point-of-view, and learning know-how about behavior in specific social situations (introductions, appropriate dress, elements of politeness, etc.). Pupils may practice these social skills in classroom activities, but they learn them effectively in the peer-culture milieu of extraclass activities.

(4) *Other activities.* Trends in *varsity athletics* appear to provide wider participation by youth; as a result team squads are larger than formerly and there are more teams: varsity, junior-varsity, B, and C teams, all of whom compete under regular game conditions. This gives those desiring to play an opportunity to do so. *Hobby and departmental clubs* depend on the interest of pupils to flourish and survive. The criterion of their effectiveness is—do they attract members? If they do not, they die. And other clubs arise to take their places.

8. *Balance.* A major reason for staff discussion of the role of the high school in providing pupil activities is to find answers to two questions: (1) How can the school provide the all-school activities that *all* pupils should experience and share? (2) How can the school provide those extraclass activities that individuals desire? Thoughtful discussion of these questions leads to an analysis of activities now being provided. If the school fails to search for answers to the questions, pupil activities tend to develop by accretion—they are additive. No high school can lay claim to an effective program merely because it has *many* activities. It may *need* many activities, but it is more important that the activities it offers are *valuable* ones. Indeed, worthwhile activities may mean *fewer* activities, not proliferation. It all depends on how the staff answers the questions above.

9. *Adaptation.* The types of activities provided by the school take into account the activities provided by the community. Therefore, voluntary pupil activities may differ greatly from school to school as community environment differs. In a district which offers many out-of-school activities, the characteristics of school activities will probably be altered. Certainly the school desires to cooperate rather than *compete* with the community for youth activities.

10. *Dues and hidden costs.* Payment of dues and other costs tend to squeeze out some potential members. Barriers of price often have the effect of dividing those who can and those who cannot afford to pay. Pupil activities are for *every* pupil who wishes to participate regardless of economic status. Increasingly, schools are underwriting activity costs by (1) all-school projects to raise funds, or (2) subsidy from the board of education.

11. *Finance.* Efficient accounting procedures grow out of centralized supervision and control of activity moneys. The school treasurer, a member of the staff, is adequately bonded. Statements of financial standing of activity funds are furnished board of education, principal, staff, pupils, and community at frequent intervals. Individual activities prepare their own budgets, which are then resolved into a total school activity budget.

Extraclass activities as such are not a controversial topic in high schools. Yet there seems to be wide variation in the extent to which extraclass activities have been assimilated into the learning experiences of youth. Schools can feel that progress toward this assimilation has taken place *if*:

(1)—Activities are not believed *extracurricular;*

(2)—many activities are scheduled within the school day;

(3)—objectives have been developed;

(4)—a staff member has been given responsibility for coordinating activities;

(5)—a pupil inventory of activities is conducted regularly;

(6)—school and community cooperate in providing good pupil activities;

(7)—appraisal of the effectiveness of activities is attempted;

(8)—some activity costs are under written by the school or board of education.

GOOD EDUCATION

(*Continued from page 23*)

A second qualification relates to differences in population-density in the various States. In general, a State characterized by sparsity of population will tend to have smaller classes (or a higher teacher-pupil ratio), and will have to transport pupils over comparatively long distances. On both these counts, the current expenditure required to maintain education at a satisfactory quality-level in such a State will be higher than in a more densely populated State.

A third qualification relates to the non-compensating nature of inter-community differences. In New York and New Jersey, for example, there are quite a few communities where the expenditure per pupil and the quality-level of education exceed the standard set by the four cities selected in the present study. Such superiority in the more fortunate communities does not, of course, compensate for inferiority in other communities of the State. In the dollar-figures given in Table 1, however, it was not feasible to take this fact into account. (This inaccuracy, it should be added, affects a few States only, and is not believed to be large in any State.)

Challenging the Gifted Student

How One Mathematics Teacher Does It

THE gifted child presents a definite challenge to any teacher who is concerned about the welfare of each individual pupil. In the mathematics classes, as in others, there is a great need to give more attention to the gifted child, to see that his curiosity and his interests are stimulated and directed, and to help him choose the work for which his talents best fit him and which will enable him to render the greatest service to society. Many people say that the gifted child will find himself and his place in the world even though he does not receive the attention his mental powers deserve. This may be partly true, but I feel that the earlier his talents are recognized and directed the more avenues of useful and satisfactory endeavor are opened to him and the greater the opportunity for him to render service commensurate with his abilities.

In reviewing the methods which I have been using in my work as a teacher of mathematics at Garfield High School, I feel that whatever progress has been made in helping the gifted child would have been impossible without the whole-hearted support of the principal and counselors. They have always shown their willingness to work with the mathematics department in the plans made to serve the needs of the superior students.

An important step was taken in this direction some years ago when we began giving an algebra aptitude test to students before they entered the ninth grade and a geometry aptitude test to those who had completed one year of algebra. This testing program served two purposes: first, it reduced the failures and waste of time on the part of those students with little or no ability in mathematics, making it possible for us to direct them into simplified mathematics courses; second, it helped us to recognize early the students with superior mathematical ability and thus aided both teachers and counselors in guiding these superior people into the programs best suited to them.

But just taking care of this mechanical part of the program, that is finding and placing the students in the right classes, is only a small part of the solution to the problem. The next step is so to enrich the classroom teaching that the interest of these gifted students is captured and held. They must see that mathematics is more than just problems in a textbook. They should catch glimpses of the power and beauty of "The Queen of Science" and become increasingly aware of its wide application in many fields of achievement.

With this purpose in mind, I try to bring as much supplementary material as possible to all my classes, but the gifted students are usually the ones who respond to the greatest extent. They show a keen desire to delve into things on their own once their interest is aroused. This gives me the opportunity to refer them to books, pamphlets, magazines, and other sources. I know many mathematics teachers are doing this same thing, and the list of books and pamphlets written for the purpose of helping them to enrich the courses they teach is growing steadily. There are also many suggestions and much information along this line in such professional journals as *The Mathematics Teacher* and *School Science and Mathematics*. At Garfield we are building up a very interesting and varied mathematics library and the students may refer to it during the supervised study period or they may take out material for a reasonable length of time.

Another commonly used method for stimulating interest, one which I find very effective, is the placing of interesting and informative side lights on the bulletin board in my classroom and on the science and mathematics bulletin board in the hall. This material brought in by either teacher or student often leads to discussions and further research on the part of the more capable members of the class.

In my own reading, I am constantly alert for information which can be used in the classroom or by individual students. For example, as I encounter an interesting and instructive article on some phase of astronomy, I remember that John has shown a desire to know more about that science; so I call his attention to the reference and suggest that he read it. The agile minds of these gifted students must be constantly fed and, even though some of the material may be too difficult for them to grasp completely, it creates a desire to work towards understanding it. "Ah! but a man's reach should exceed his grasp, or what's a heaven for?"

The Office of Education called a conference for November 13 and 14 to consider "Provisions We Can Make for the Rapid Learner in Science and Mathematics." This is a vital problem in American education today as efforts are made to sustain the interest of young people in mathematics, science, and other areas of learning which are fundamental in the training of our Nation's future scientists. SCHOOL LIFE gladly presents to its readers this timely article by Miss Inez Kelly, of Garfield High School, Terre Haute, Indiana.

Assigning projects of supplementary work, I find, is also a valuable aid in arousing and furthering interest, especially in the case of the gifted child. I use this method to the greatest extent with the students studying plane geometry in the tenth grade. They choose from a list of topics placed on the bulletin board or they may decide to investigate a phase of mathematics which interests them and which is not on the list. These projects include accounts of lives of famous mathematicians and scientists, further research on a mathematical principle studied in class, the solution of more difficult problems than those assigned in class, the construction of mathematical instruments or models, drawings, and work showing results of indirect measurement made on the school campus, and original designs in curve-stitching. The last-named project appeals to those interested in geometric design and the mathematical curves represented. These projects

range from the simple to the more difficult so that all students may participate, for even those who are not especially gifted in mathematics have their interest increased by working on and presenting topics outside the regular class-room work. It seems to give students a sense of accomplishment to be able to bring new information to the rest of the class, and this is especially true when they find it is also new to the teacher. Although a little prodding of the bright but lazy student is often necessary, I feel it is best to keep the projects on a voluntary basis. A few will ask, "Do we get extra credit for this work?" but the better students seem to derive satisfaction from investigating unknown territory.

Some teachers may ask, "How can you find time for all these supplementary projects and still cover the work required to prepare students adequately to progress through the different courses in mathematics?" This is indeed a big problem for we cannot neglect the teaching of the fundamentals or basic principles if we expect students to continue the study of mathematics and perhaps later enter a career requiring mathematics as a basis. Neither can we neglect the average and below average students while helping the more capable members of our classes.

As I struggled with this problem, I became more and more convinced that I needed more time outside the class room in order to further the program for the superior student. Four years ago I consulted our principal, Mr. Conover, and received his permission to start a mathematics club which was to meet once a week during the activities period. Those eligible for membership were juniors and seniors who were enrolled in either solid geometry, advanced algebra, college algebra, or trigonometry classes. By special permission of the sponsor, a few sophomores showing outstanding mathematical ability were permitted to join. Not all the members during the four years have been gifted students, but those of lesser ability were able to make contributions because of their interest in mathematics, and they profited greatly by the leadership and accomplishments of the more capable members.

Although I had started the club feeling somewhat doubtful as to its success, it wasn't long until I saw that I had no cause for worry. The members were more than eager to take part in the programs; and, although I had sponsored other types of clubs in the past, there were none which moved along under their own power as this mathematics club did. Programs were planned by a program chairman aided by suggestions from the club and sponsor. Members volunteered readily to prepare reports on topics which interested them and no phase seemed too deep for them to wish to explore.

Programs have been varied, e. g., reports by club members, talks by student and faculty personnel of nearby colleges and by industrial leaders, practice in using the slide rule, and mathematical puzzles and recreations. Favorite topics for reports and discussions have been The Fourth Dimension, The Theory of Relativity, Topology, Number Systems, and the Theory of Probability. One semester we had a series of reports on the history of surveying instruments; and, as a result, one club member made a plane table to add to the instruments we were already using in field work in the mathematics classes. Many of the recreations and puzzles were made by club members; and these, with brain teasers and paradoxes found in books and periodicals, have provided a lighter type of program as a variation from speeches and reports.

In order to take care of finances so necessary to the successful functioning of any club, members pay annual dues of fifty cents and the club sponsors one money-making project each year—a mixer following one of the basketball games. The money earned is used to purchase books and instruments for the mathematics library and to help defray expenses of the Christmas party, the spring picnic, and the annual visit to the Sci-Math Assembly held at Purdue University for all interested students of Indiana high schools.

Exhibits taken to the Purdue meeting from Garfield are the work of the mathematics classes and club. The students who attend these meetings come back with new ideas and greater enthusiasm for science and mathematics.

Mr. Walter Carnahan, State Consultant in Mathematics and one of the originators of the Sci-Math Assembly, has been most helpful to us at Garfield in our work with the gifted student. He has been generous with his time and his suggestions, and the students respond with a lively interest to his informal "pep-talks" on mathematics.

Teachers in the science department at Garfield work with the mathematics teachers in encouraging the superior students, and each year more boys and girls are becoming interested in preparing a project for the National Science Talent Search.

I know many teachers of high school mathematics are working, as we are at Garfield, to provide a greater challenge for the students of superior mathematical ability; and I am sure that they are convinced, as I am, that the extra work and planning involved are bringing about tangible results. Aware, as we must be in this atomic age, of the need for leaders in science and mathematics, we cannot start too early to fan the spark that smoulders in these eager young minds.

EDUCATIONAL TV

(*Continued from page 21*)

tional stations, you have your work cut out for you in helping Americans to adjust themselves to their new responsibilities as citizens of a nation commanding world leadership, citizens who must study and solve correctly many knotty international problems. They are eager to know how to work for peace. They know that the cost of failure to work for a peaceful world may be extermination.

And finally, of supreme importance in these tense days of danger, is the need to accelerate our educational and informational processes for national defense. Our educational television stations can contribute immeasurably to our preparedness.

Power at Hand

I hope also that the example and the inspiration of this Workshop will assist many other educational institutions to move forward promptly with their plans to build stations.

Ladies and gentlemen, the beginning of educational television in America is in your hands.

The children of America, the grown-ups of America, hungry for the benefits you have to offer, await the fruit of your efforts.

Nowhere in the world have educators been armed with the power you now have at hand to speed the education of an entire nation.

I know that you approach the fulfillment of your mission with a sense of high resolve, of humility and of dedication.

And knowing this, I know that success will crown your labors.

Defense Education Information

The Office of Defense Mobilization recently issued a most important statement setting forth national policies with respect to the training and utilization of scientific and engineering manpower.

Labeled Defense Manpower Policy No. 8, this statement was published in full in the Federal Register of September 6, 1952. Because of the implications of the policy for secondary schools and institutions of higher education, U. S. Commissioner of Education Earl James McGrath circulated the full text of O. D. M., Policy No. 8 as an Office of Education Defense Information Bulletin.

Excerpts of the statement of particular interest to schools and colleges are as follows:

This policy has been recommended by the interagency Manpower Policy Committee, its Committee on Specialized Personnel, and the national Labor-Management Manpower Policy Committee of the Office of Defense Mobilization. It is issued for information and guidance to employers of scientists and engineers; to educational institutions and to professional associations; and assigns to Government agencies the responsibility for providing assistance and leadership in the fields of action required of them.

* * * * *

Despite the fact that very large numbers of young men and women have been trained in science and engineering since World War II, stringencies of engineers and scientists now exist in some fields and acute shortages are in immediate prospect. This situation has been caused in part by the increased demand resulting from the defense program with no corresponding decrease in nondefense programs and in part by the very small number of persons trained in these fields during World War II.

As the defense program develops, two highly significant facts with respect to specialized personnel stand out:

First, the demand is rising rapidly and will continue at a high level indefinitely.

Second, college enrollments show that the supply completing training is declining and will continue to decline through 1954 after which an upturn will occur in the number of engineering graduates.

These facts indicate that in the next few years it will be very difficult, or impossible, to obtain a supply of specialized personnel equal to the expanded demand. Vigorous and intelligent action in the utilization of specialized manpower in the armed forces and in civilian activities is required. Both military and civilian manpower policies should recognize that within the objectives of attaining maximum military strength and maintaining a vigorous civilian economy the achievement of an improved balance between the supply of and demand for specialized personnel is our most urgent manpower goal.

The purpose of this policy is:

- To focus attention on the problems created by the shortage of trained scientists and engineers in the attainment of maximum military strength while maintaining a healthy civilian economy and to enlist the support and assistance of the public, industry, educational institutions, and Government agencies in the solution of these problems.
- To indicate actions which should be taken to provide scientific and engineering manpower to achieve necessary research and development and production goals for 1952 and for the years immediately ahead.

It is the policy of the Federal Government to take and to encourage the taking of action which will aid in achieving the following objectives:

- A. To utilize most efficiently existing resources of scientific and technical skills in private industry, in the civil government, in the armed forces, and in educational institutions.
- B. To develop increasingly reliable information regarding requirements and resources of scientists and engineers to meet both immediate and long-term national needs.
- C. On the basis of needs indicated under B, to attract and train the additional number of able young men and women required for scientific and technical fields.

Industrial employers, educational administrators, scientists, and engineers, as individuals, and professional associations of scientists and engineers, have an important responsibility to assist in achieving these objectives.

Employers of scientists and engineers are urged:

- To develop, in cooperation with educational institutions, especially the junior colleges and technical institutes, improved programs for selecting and training subprofessional personnel to do work which requires less than the full training of professional scientists and engineers.
- To cooperate with educational institutions in the development of on-the-job or off-the-job training for scientists and engineers which will increase and broaden the professional competence of such personnel.

Professional associations of scientists and engineers are urged:

- To undertake informational programs designed to bring to the attention of students, through normal educational channels, and to individuals employed in subprofessional positions but possessing an aptitude for science or engineering, the career opportunities in scientific and technical fields in order to attract into these fields additional students with the required ability and interest.
- To cooperate with educational institutions in studying the adequacy of existing curricula in the sciences and in engineering, in developing better teaching methods and in achieving maximum utilization of teaching facilities in scientific and engineering fields.

Educational institutions are urged:

- To make special provision for students who possess the necessary aptitude for engineering work but who lack the courses in science and mathematics prerequisite for admission to the engineering college either because of the inadequacy of high school offerings or because their interest in an engineering career was developed too late in the high school program. Such special provision should include a program for locating the potential candidates, encouraging them to apply for enrollment in colleges offering scientific and engineering courses, and special counseling to assist the candidate in working up a suitable curriculum. In most instances the candidate's initial shortcomings may be made up either by a lengthening of the normal curriculum or by intensification through additional work during summer vacation periods.
- To make further studies of the engineering curriculum, as regards both its content and its length, and to give consideration to all possible measures which may be indicated under present conditions of engineering and scientific manpower shortages, such as acceleration, cooperative work-study arrangements, etc.
- To make further studies of teaching methods employed in the sciences and engineering and of the use of teaching and research facilities in these fields in order to achieve the maximum educational return from existing staffs and facilities.
- To study the causes of high drop-out rates among qualified students of engineering and science and to take steps toward minimizing the number of such drop-outs.
- To strengthen high school curricula in order that more high school graduates will be eligible for entrance into engineering colleges and to establish closer working arrangements between colleges and universities and high schools to the end that both high school students and the faculty will become more aware of the opportunities in the engineering field.

"... in touch with democracy"

(*Continued from page 18*)

When the teachers arrived in Washington on the day following South Korea's invasion, an atmosphere of gloom and anxiety pervaded the group. Most of the group lived in Seoul or north of Seoul. They stoically accepted the initial bad news from the battle front. It was to be several months before any word could be received from fathers, mothers, husbands, wives, children or friends. Efforts were made to obtain information concerning relatives through the International Red Cross and our Embassy in Korea but to no avail for some time since all normal channels were disrupted.

Another Six Months

The Office of Education and the Department of State decided to continue their program as scheduled and to extend their fellowships for another 6 months since it was impossible for them to return home under the circumstances.

In Washington, D. C., the teachers visited the Washington Monument, the Lincoln and Jefferson Memorials, the National Art Gallery, Mount Vernon and other places of historic interest. They saw Congress in session, the Supreme Court and the Library of Congress. On visiting Mount Vernon, one of the teachers observed: "I saw the key to the Prison of Bastille on the wall of the residence, and recognized the coincidence that American generals are fighting for the complete independence of Korea just as General Lafayette fought for the independence of the United States." The teachers then attended the Washington Orientation Center to observe the methods used there in providing government-sponsored students and trainees instruction in English and a general orientation to our life, history, manners, and customs.

Meanwhile, efforts were being made to find suitable assignments for the teachers which would help the South Korean cause. All of them asked to do something here or abroad that would assist South Korea in its fight for freedom and to aid the United Nations in its efforts to resist Communist aggression. Within a few weeks, eight of the nine men were given assignments with the Department of the Army as interpreters, translators, and interrogators in Tokyo with SCAP. One of the men could not pass the physical examination and was heartbroken because he could not go with the others.

For those remaining in Washington and for those who were in Tokyo, the news of family was both good and bad. A terse dispatch announced that the wife and cousin of one of the men had been killed by a Communist tank shell near the railroad station in Seoul. The home and other property of one of the women living north of Seoul had been destroyed. It was not until she returned to Seoul in November that she learned her husband had been captured and shot by the retreating Communist forces on October 2. He had successfully evaded capture those many months, but when he heard of the Inchon landing, he returned to his village too soon. Along with sixty-two civilians, doctors, teachers, druggists and other community leaders he was summarily executed. This was confirmed by more than 20 persons from her home town.

Search for Children

No one knew where her two children were. Refugees had been evacuated from this particular city to five villages. She then set out on foot to visit these villages in turn seeking the children. Finally, footsore and weary, she found a policeman in one of the villages who had taken her children into his home. A high school girl had brought them to the village and had persuaded this family to care for the children, aged eight and four. The older child recognized her mother who had been in the United States about nine months, but the four-year-old did not know her. The younger child was ill and the mother carried her to Seoul on her back for treatment, the older child walking along beside them.

For the Korean People

At this point, the teacher had to leave Seoul hurriedly because of Chinese advances from the north. She and her two children rode on a truck for 7 days until they reached Pusan which was again choked by refugees. Food and lodging were almost impossible to obtain, particularly since she must be with the children most of the day. For a time she had work with one of the Supply Units of the U. N. Army and later took an assignment with the South Korean Broadcasting Company, explaining the purposes and aims of the United Nations to the Korean people.

At the moment, this teacher is working in Pusan with the United States Information Service, doing her part in translating into the Korean language useful educational and cultural materials for the Korean people. These publications will be particularly helpful when peace has been restored.

Number of Projects

The teachers had a number of projects in mind which they hoped to implement upon returning to Korea. One was a group project to conduct a seminar for other teachers of English who had not had the opportunity to study abroad in an English-speaking country. They hoped to have an exhibit of teaching aids and materials with instruction on how they should be used.

Individual ideas or plans included setting up an "American Room" which would be a reading room containing books, pictures and other materials of interest relating to the United States and the American way of life. Some of the teachers proposed to translate selections from American literature into Korean and to prepare typewritten books for class use. Several planned to try to reduce the size of their English classes in order to do more effective work with smaller groups. Others realized the value of school and community as well as parent and teacher cooperation in the school program and indicated that this would be an objective they hoped to accomplish.

Need Our Aid

There will be a delay in bringing these plans and ideas into full fruition. The school program has been almost completely dislocated by the war. Some schools are being held in the open air where buildings have been destroyed; others hold no sessions. It is extremely difficult to pay teachers anything at this time. All forms of equipment, even paper and pencils, are lacking. These teachers as well as the Korean people will need our aid and support if they are to reestablish their schools on the basis of a democratic philosophy which is the foundation of any free society. With the opportunity, these teachers will be the spokesmen of a new educational era in Korea.

Teachers of Exceptional Children

A nation-wide study of their qualifications

WHAT special knowledge, skills, and understandings are needed by teachers of exceptional children such as the crippled, mentally retarded, and speech defective? What standards are needed in State and local school systems in order to secure qualified personnel? What constitutes adequate professional preparation and how can this best be provided? These and many other questions are being explored by the Office of Education study "Qualifications and Preparation of Teachers of Exceptional Children."

This project, which was first announced by U. S. Commissioner of Education Earl James McGrath in January 1952, was made possible by a grant of $25,500 from the Association for the Aid of Crippled Children of New York City. Mr. Leonard Mayo is director of the association.

"School programs for handicapped children have developed rapidly in recent years," said Commissioner McGrath, in announcing the study. "Much more needs to be done. Only about 15 percent of the Nation's children needing unusual adjustments in their school programs are reported receiving special help. . . . A number of factors hold back the extension of educational services. . . . Shortage of professional personnel is most crucial."

The study has promise for more than 4,000,000 American school-age children. Approximately 2,000,000 children have physical handicaps. Classed as slow-learning are about 700,000 children. Other children deserving special attention are the mentally gifted, and the children who are maladjusted socially or emotionally.

The study is directed by Dr. Romaine P. Mackie, Specialist, Schools for the Physically Handicapped, Office of Education. She is counseled by two committees. One is an Office of Education Policy Committee which will assist the Director in management and personnel aspects of the study. The members of this committee are:

Dr. GALEN JONES (Chairman of the Office Policy Committee) Director, Instruction, Organization and Services Branch, Division of State and Local School Systems.

Dr. EARL ARMSTRONG, Acting Head, Division of Higher Education.

Dr. FRED BEACH, Chief, Section on State School Systems, Division of State and Local School Systems.

Dr. BESS GOODYKOONTZ, Acting Director, Foreign Educational Systems Branch, Division of International Education.

Mr. ARTHUR HILL, Chief, Section on Exceptional Children and Youth, Division of State and Local School Systems.

Dr. HERBERT CONRAD, Chief, Research and Statistical Standards, Program Development and Coordination Branch, Office of the Commissioner.

The other is the National Committee of leaders in special education from various parts of the United States. It is the function of this committee to assist in developing the study and to suggest people to participate in it. Members of the committee are:

Miss GWEN RETHERFORD (Chairman, elected by the National Committee) Director, Education of Exceptional Children, Kentucky State Department of Education.

Dr. WILLIAM CRUICKSHANK, Professor of Education, Syracuse University.

Mr. FRANCIS DOYLE, Chief, Bureau of Special Education, California State Department of Education.

Dr. SAMUEL A. KIRK, Professor of Education, University of Illinois.

Mrs. HAZEL C. MCINTIRE, Director, Division of Special Education, Ohio State Department of Education.

Mr. JOHN TENNY, General Adviser, Special Education, Wayne University.

Dr. W. H. LEMMEL, Superintendent of Schools, Baltimore, Maryland.

The Executive Secretary of the International Council for Exceptional Children (a department of the National Education Association), Mr. Harley Wooden, is ex officio member of both committees. Mr. Lloyd Dunn is serving as full-time research assistant on the study.

The study also has the counsel of a number of consultants, who will review written material and make suggestions as to personnel and procedures. Among these consultants are:

Dr. LEO CAIN, Dean, Education Services, San Francisco State College.

Miss ANNA ENGEL, Divisional Director, Department of Special Education, Detroit Public Schools.

Dr. JOHN LEE, Dean, Graduate School, Wayne University.

Miss MARY FRANCES MARTIN, Supervisor of Special Education, Los Angeles City Public Schools.

Dr. FRANK J. O'BRIEN, Associate Superintendent, New York City Public Schools.

Dr. RALPH FIELDS, Director of Instruction, Teachers College, Columbia University.

Mr. ROBERT H. MORRISON, Assistant Commissioner for Higher Education, State of New Jersey.

Taking part in the study in different ways are numerous public and private agencies. In all, it is estimated that 2,000 people are contributing.

Two techniques are being used to secure data. One is the setting up of committees to study the competencies needed by special education personnel. The other is the use of a series of inquiry forms which go to State and local school systems, and to colleges and universities.

Ten separate committees will make statements describing the distinctive competencies needed by teachers of blind, crippled, deaf, gifted, hard of hearing, mentally retarded, partially seeing, socially maladjusted, and speech-defective children, and children with special health problems.

Through the inquiry forms, information will be gathered concerning the standards of State and local school systems for teachers of exceptional children. Data will also be gathered on college and university programs for the preparation of teachers of exceptional children.

This information will eventually be presented to a work conference of leaders in special education. It is anticipated that suggestions and recommendations which will come from this body concerning the qualifications and preparation needed by special education personnel will form a basis for future planning in State and local communities and in colleges and universities. Thus, the outcome of the study might well aid in providing educational personnel better prepared and qualified to serve the needs of exceptional children.

New Books and Pamphlets

Susan O. Futterer, Associate Librarian, Federal Security Agency Library

A Blind Child, Too, Can Go to Nursery School. By Pauline M. Moor. New York, American Foundation for the Blind, 1952. 16 p. Illus. (Preschool Series No. 1)

Elementary Social Studies Instruction. By Maurice P. Moffatt and Hazel W. Howell. New York, Longmans, Green and Co., 1952. 486 p. $4.25.

The Individual and Liberal Education. Papers delivered at the dedication of Johnston Hall, April 19–21, 1951. Minneapolis, Published for the Social Science Research Center of the Graduate School, by The University of Minnesota Press, 1952. 102 p.

Measurement of Teacher Merit. By William A. McCall. Raleigh, N. C., State Superintendent of Public Instruction, 1952. 40 p. (Publication No. 284)

Modern Methods in Secondary Education. By Jean D. Grambs and William J. Iverson. New York, William Sloane Associates, 1952. 562 p. Illus. $4.75.

Physical Education Activities, Sports and Games. By Louis E. Means. Dubuque, Iowa, Wm. C. Brown Co., 1952. 328 p. Illus. $4.00.

Play Groups for Children of School Age. By Miriam Cohen Harper. New York, Play Schools Association, Inc., and Bronx House, 1952. 90 p. 75 cents.

The Preparation and Training of Pupil Personnel Workers. A Report of The State Committee on Credentials for Pupil Personnel Services. Sacramento, Calif., State Department of Education, 1952. 85 p. (Bulletin, Vol. XXI, No. 5)

The Shortage of Special Class Teachers in Large Cities. By Sidney H. Firestone and Jacob S. Orleans. New York, Division of Teacher Education, College of the City of New York, 1952. 39 p. (Research Publication No. 11)

The Social Sciences at Mid-Century. Papers delivered at the dedication of Ford Hall, April 19–21, 1951. Minneapolis, Published for the Social Science Research Center of the Graduate School, by The University of Minnesota Press, 1952. 109 p.

Social Studies in the Secondary School. By Clarence D. Samford and Eugene Cottle. New York, McGraw-Hill Book Co., Inc., 1952. 376 p. $4.25.

Teaching Spanish-Speaking Children. By L. S. Tireman. Rev. Ed. Albuquerque, N. M., The University of New Mexico Press, 1951. 252 p.

Techniques for the First Grade Teacher. Chicago, Board of Education, 1952. 79 p. Illus.

Toward Better Schools. Third Report. Commission on School Buildings of the State of New York. Albany, N. Y., 1952. 40 p. Illus.

(Books and pamphlets listed should be ordered from the publishers.)

Selected Theses in Education

Ruth G. Strawbridge, Bibliographer, Federal Security Agency Library

THESE THESES are on file in the Federal Security Agency Library, where they are available for interlibrary loan.

An Analysis of a Program of Speech Therapy for Children with Cerebral Palsy. By Harry F. Hollien. Master's, 1951. Boston University. 129 p. ms.

Bertrand Russell's Philosophy of Education. By Robert C. Marsh. Doctor's, 1951. Harvard University. 269 p. ms.

The Core Curriculum in Michigan Classrooms. By Arden H. Detert. Master's, 1952. University of Michigan. 62 p. ms.

Critical Analysis of Current Trends in Student Teaching. By W. R. Rucker. Doctor's, 1952. Harvard University. 218 p. ms.

Development of the Support of Public Education by the State of Virginia. By Elster C. Shortt. Doctor's, 1952. Harvard University. 435 p. ms.

A Follow-up Study of Drop-outs in Lakeview Senior High School From 1948–1952. By William S. Grout. Master's, 1952. University of Michigan. 59 p. ms.

The Management of Internal School Finance with Reference to Extracurricular Activity Funds. By Grover L. Angel. Doctor's, 1952. George Washington University. 318 p. ms.

The Public Health Educator: A Study of a Profession from Sociological, Philosophical, and Analytical Viewpoints with a Discussion of some Current Problems. By Lillian K. Derderian. Doctor's, 1952. Harvard University. 286 p. ms.

Pupil Promotion in Selected High Schools of the Southern Association. By Rual W. Stephens. Doctor's, 1951. Harvard University. 288 p. ms.

The Retention of Meaningful Material. By Joseph F. Sharpe. Doctor's, 1951. Catholic University of America. 66 p.

A Study of Clear Lake Camp's Contributions to the Elementary Curriculum. By Herman C. Kranzer. Master's, 1952. University of Michigan. 49 p. ms.

A Study in Transfer Sex Differences in the Reasoning Process. By Max M. Kostick. Doctor's, 1952. Harvard University. 73 p. ms.

A Study of Differences in Intelligence Among Children Within Families. By Agnes A. Hansen. Master's, 1952. University of Michigan. 63 p. ms.

The Treatment of Russia in American History Textbooks. By William C. Nyerick. Master's, 1950. Boston University. 50 p. ms.

U. S. GOVERNMENT PRINTING OFFICE: 1952